

MDAQMD WILDFIRE SMOKE FACT SHEET



- **COMPOSITION OF SMOKE**

- Carbon Dioxide
- Carbon Monoxide
- Water vapor
- Hydrocarbons
- Nitrogen oxides
- Trace minerals and several thousand other compounds
- Particulate Matter
 - Principal pollutant of concern for short term exposure typically experienced by public
 - Smoke particles tend to be fine <one micrometer in diameter (a human hair = 60 mm in diameter)
 - Can be inhaled into deepest recesses of lung – represent greater health concern than larger particles.
 - Dust masks are usually ineffective in filtering out fine smoke particles

- **HEALTH EFFECTS OF ASH & SMOKE**

- **Healthy Individuals**
 - Irritated eyes & airways
 - Coughing/scratchy throat
 - Irritated sinuses
 - Headaches
 - Runny nose
- **Individuals with Heart & Lung disease**
 - May experience health effects earlier & at lower smoke levels than healthy people.
 - May experience shortness of breath, chest pain, discomfort & worsening of pre-existing conditions;
 - May require medical care as a result of exposure.
- **The Elderly**
 - More susceptible to air pollution because they are more likely to have pre-existing lung and heart disease.
 - Respiratory defense mechanisms may decline with age – can compromise immune defenses of lungs.
- **Children**
 - More susceptible because lungs are still developing; spend more times outdoors; engage in more vigorous activity; and inhale more air per pound of body weight.
 - Long-term exposure may lead to decreased lung function.

- **TIPS FOR PROTECTING YOUR FAMILY FROM THE HEALTH EFFECTS OF SMOKE**

- **Stay Indoors** – Limit exposure to unhealthful air quality by staying indoors as much as possible. Keep windows and doors closed. Use your air conditioning system and place it on recirculation mode, if available.
- **Reduce outdoor activity** – Avoid prolonged physical involvement in outdoor activities and events that require strenuous exercise. Choose indoor activities for children.
- **Consult your physician** – If you or a family member suffers from a heart or lung ailment – including asthma - talk with your doctor about special precautions and treatments that will help minimize the health impacts of smoke. Call the doctor immediately if health conditions worsen.
- **Stay informed** – Keep abreast of local news reports, weather forecasts and air quality alerts issued by the Mojave Desert AQMD to local media, school districts and online at www.mdaqmd.ca.gov. The MDAQMD utilizes the EPA's Air Quality Index (below) to report local air quality conditions and recommend precautions that can be taken to protect the public's health:

AIR QUALITY INDEX FOR PARTICLES		
Air Quality Index	Air Quality	Protect Your Health
0 to 50	Good	None.
51 to 100	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion.
101 to 150	Unhealthy for Sensitive Groups	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.
151 to 200	Unhealthy	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
201 to 300	Very Unhealthy	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
301 to 500	Hazardous	Everyone should avoid all physical activity outdoors; people with heart or lung disease, older adults, and children should remain indoors and keep activity levels low.

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- **EMERGENCY OPERATION PROCEDURES WHICH MAY BE IMPLEMENTED DURING SMOKE EPISODES**

- **Clean Air Shelters** – Public health officials may designate places for residents to get out of the smoke, when regular housing is inadequate. Such places may include large commercial buildings, educational facilities, shopping malls or any place with effective air conditioning & particulate filtration.
- **Closures** – School districts may order closures if smoky conditions make travel to and from school hazardous. Closures can target sensitive populations or specific, outdoor sporting events and practices. A decision to restrict industrial emissions should be based on local air pollution and emission characteristics of particular industries. Curtailment may not be beneficial if eliminating industrial emissions will not significantly reduce local air pollution.
- **Evacuation** – Leaving an area of thick smoke may be a good protective measure for sensitive group members, but is often unfeasible. Thus, public health officials are encouraged to develop plans for local protection of sensitive groups.

- **ADDITIONAL ONLINE RESOURCES**

- AIR NOW Smoke Events Page: http://cfpub.epa.gov/airnow/index.cfm?action=smoke_fires.main
- National Weather Service's Website for Western USA: www.wrh.noaa.gov
- CAPCOA Smoke Impact Information Page: <http://www.airquality.org/smokeimpact/>

